Lab 10: One-way ANOVA in SPSS

In the sample dataset, the variable *Sprint* is the respondent's time (in seconds) to sprint a given distance, and *Smoking* is an indicator about whether or not the respondent smokes (0 = Nonsmoker, 1 = Past smoker, 2 = Current smoker). Let's use ANOVA to test if there is a statistically significant difference in sprint time with respect to smoking status. Sprint time will serve as the dependent variable, and smoking status will act as the independent variable.

We'll first want to look at descriptive statistics and graphs to get picture of the data before we run any inferential statistics.

The sprint times are a continuous measure of time to sprint a given distance in seconds. From the Descriptives procedure (**Analyze > Descriptive Statistics > Descriptives**), we see that the times exhibit a range of 4.5 to 9.6 seconds, with a mean of 6.6 seconds (based on n=374 valid cases). From the Compare Means procedure (**Analyze > Compare Means > Means**), we see these statistics with respect to the groups of interest

Running the ANOVA

1. Click **Analyze > Compare Means > One-Way ANOVA**.
2. Add the variable *Sprint* to the **Dependent List** box, and add the variable *Smoking* to the **Factor** box.
3. Click **Options**. Check the box for **Means plot**, then click **Continue**.
4. Click **OK** when finished.

Output for the analysis will display in the ***Output Viewer*** window.

Report your statistics in a results section.

F(Df btwn, Df within) = _____, p=_____